

DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION

HIRM  
Rev. 7  
SAN JOAQUIN HELICOPTERS  
UH-1B  
September 18, 2003

TYPE CERTIFICATE DATA SHEET NO. HIRM

This data sheet which is part of type certificate No. HIRM prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirement of the Federal Aviation Regulations.

Type Certificate Holder                      San Joaquin Helicopters  
1407 South Lexington Street  
Delano, CA 93215

Type Certificate Holder Record              Hawkins & Powers Aviation transferred ownership of TC HIRM to San Joaquin Helicopters on June 29, 2001

I. Model UH-1B, (Restricted Category Military Surplus Helicopter) approved July 19, 1979

Engines    Honeywell T-53-L-11

Fuel    Mil-T-5624, Grade JP-4, alternate fuel MIL-T-5624, Grade JP-5  
(See note 14 for substitute and emergency fuels)

Engine Limits	Torque Pressure P.S.I.	Output Shaft (RPM)	Exhaust Gas Temperatures (deg. C.)
Takeoff (5 min.)	47.5 (1100 HP)	6600	610
Max Cont.	39.0 (900 HP)	6400	590

See Notes 11, 12, and 13

Rotor Limits	Power Off	Power On
	Maximum 339 RPM (Minimum 295 RPM)	Maximum 324 RPM (Minimum 294 RPM)

Airspeed Limits                                      Never exceed 120 knots (138 m.p.h.) up to and including 6600 lbs. G.W. sea level to 2,000 ft.  
Never exceed 112 knots (129 m.p.h.) at 7200 lbs. G.W. sea level to 2,000 ft.  
(See Note 2 for specific operating airspeed limitations)

C.G. Range    Longitudinal C.G. limits  
(+125.0) to (+136.0) to 6600 lbs. and above  
(+125.0) to (+136.4) at 6500 lbs.  
(+125.0) to (+137.3) at 6250 lbs.  
(125.0) to (+138.0) at 6000 lbs. or less

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Empty Weight C.G. Range	(125.0) to (+138.0)
Datum	Station 0, datum is 7.6 inches aft of the most forward point of the fuselage nose section.
Leveling Means	Plumb line from top of left cabin door frame
Maximum Weight	8500 lbs.
Minimum Crew	1 (pilot)
Number of Seats	See Note 16
Maximum Baggage	200 lbs. (150lbs./sq. ft. deck loading maximum)
Fuel Capacity	163 U.S. Gals if Crashworthy Fuel System is installed 168 U.S. Gals if Crashworthy Fuel System not installed.
Oil Capacity	3.25 gal (+157)
Rotor Blade and Control Movements	For rigging information refer to TM 55-1520-219-20
Approved Serial Numbers	U.S. Military Surplus UH-1B Helicopters as identified in FAA approved San Joaquin Helicopters Report SJHUH-01-005 dated May 15, 2001, or later FAA approved revision. A current copy is on file at the Los Angeles ACO.
Certification Basis	<p>FAR 21-25 (a)(2) effective February 11, 1965. Type Certificate No. H1RM issued July 19, 1979, for the purpose(s) of.</p> <ol style="list-style-type: none"><li>1. Agriculture operations under FAR 21.25 (b) (1)  Note: In accordance with FAR 36.1(a)(4), compliance with the noise requirements was not shown. Therefore, aircraft certificated under this type certificate are only eligible for agricultural operations excepted by FAR 36.1(a)(4) and defined under FAR 137.3.</li><li>2. Forest and wildlife Conservation operations under FAR 21.25(b)(2)  Note: In accordance with FAR 36.1(a)(4), compliance with the noise requirements was not shown. Therefore, aircraft certificated under this type certificate are only eligible for dispensing fire fighting materials excepted by FAR 36.1(a)(4) and defined under FAR 137.3</li><li>3. External load operations under FAR 21.25(b)(7)  Note: In accordance with FAR 36.1 (a)(4), compliance with the noise requirements was not shown. Therefore, aircraft certificated under this type certificate are only eligible for external operations excepted by FAR 36.1(a)(4) and defined under FAR 133.1(b)</li></ol> <p>Any alteration to the aircraft for Special Purposes not identified above requires FAA approval and in addition may require noise and/or flight testing.</p>

**Certification Basis (cont'd)** General Note: Any subsequent modifications to the helicopter type certified under this Type Certificate are to have the certification basis for that modification established under 14 CFR 21.101 published June 7, 2000 which became effective June 10, 2003. Otherwise non-significant modifications are to meet the requirements of CAR 7 airworthiness standards, including Amendment 7-5, effective May 1962 plus special conditions for turbine engine installations and 14 CFR 29.1529, Instructions for continued airworthiness, Amendment 20, effective September 11, 1980. Also should consider that military installed crashworthy fuel systems in some of these aircraft and should require that to be maintained.

**Date of Application** September 29, 1978

**Production Basis** None. No helicopter may be produced under this approval. Prior to adding serial numbers to this Type Certificate, each candidate helicopter must undergo a conformity inspection. The conformity inspection will be conducted in accordance with a Type Inspection Authorization, Part 1, or request for conformity that will include as a minimum, the inspections contained in the FAA Rotorcraft Directorate Restricted Category conformity document dated September 25, 2001 or later FAA approved revisions.

**Equipment** The basic required equipment for each special purpose as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in each type helicopter for certification. UH-1B Standard U.S. Army cargo suspension installation, part number 204-070-529-7, in accordance with TM55-1520-210-23P (Parts Manual), installed and maintained in accordance with TM55-1520-210-23 (Maintenance Manual), and operated in accordance with TM55-1520-210-10 (Operations Manual).

**NOTE 1** A current weight and balance report, including list of equipment included in certificated empty weight and loading instructions, must be provided for each aircraft at time of original airworthiness certification and at all times thereafter. Refer to pages 12-4a and 12-4b of Operators Manual (TM 55-1520-219-10), SJHUH-01-003 Report dated May 15, 2001. Inspection and Modification Requirements for SJH UH-1B helicopters, or Appendix D of Maintenance Manual (TM 55-1520-219-20) for CG determinations.

**NOTE 2** The following placards must be prominently displayed in the cockpit in full view of the pilots:

Placard No. 1

(a) OPERATING LIMITS  
CALIBRATED AIR SPEED – KNOTS

Density								
Altitude								
Or less	6600 lbs.		7200 lbs.		8000 lbs.		8500 lbs.	
RPM	6400	6600	6400	6600	6400	6600	6400	6600
Sea Level								
to 200ft.	120	120	109	112	95	101	86	95
3000 ft.	116	116	105	108	92	97	82	92
6000 ft.	102	106	92	97	77	86	68	80
9000 ft.	90	94	79	86	65	76	-	-
12000 ft.	77	84	66	75	-	-	-	-
15000 ft.	64	72	-	-	-	-	-	-
18000 ft.	51	61	-	-	-	-	-	-

## NOTE 2 (cont'd)

FROM 0 TO 70 KNOTS USE 6000 TO 6600 RPM RANGE

FROM 70 TO 120 KNOTS USE 6400 TO 6600 RPM RANGE

Reduce air speed when vibration is excessive.

External load operation:  $V_{ne}$  will be determined for each proposed external load application.

## Placard No.2

'THIS HELICOPTER MUST BE OPERATED IN ACCORDANCE WITH THE RESTRICTED CATEGORY OPERATING LIMITATIONS OF FAR 91.313 AND WITH THE LIMITATIONS NOTED IN U.S. ARMY TM55-1520-219-10, CHAPTER 7.'

## Placard No. 3

'VFR OPERATIONS ONLY.'

## NOTE 3

The helicopter must be serviced, maintained, inspected repaired and overhauled in accordance with the documents specified in San Joaquin Helicopters Instructions for Continued Airworthiness Report, SJHUH-01-001, dated May 15, 2001, (or later FAA accepted revision) or other FAA accepted inspection programs. The TC holder's Instructions for Continued Airworthiness Report is part of the TC holder Instructions for Continued Airworthiness.

## NOTE 4

In addition to the standard helicopter requirements, the following additional data and/or configuration requirements must be met for each individual model UH-1H helicopter upon application for an Original Special Airworthiness Certificate

A. Each helicopter must pass a conformity inspection in accordance with this TCDS, plus any additional special instructions attached to the Request for Conformity, FAA Form 8120-10. In addition a check by the type certificate holder, of the flight characteristics in accordance with all applicable portions of the FAA approved SJH Inspection Procedures Manual, as appropriate for each aircraft.

B. The maintenance, overhaul and modification records of each helicopter must be reviewed for military changes that may affect the airworthiness of the helicopter.

C. The Department of the Army Technical Bulletins listed in San Joaquin Helicopters Report SJHUH-01-003 dated May 15, 2001, (formerly Hawkins and Powers Report, HPA 120, Part One, dated May 30, 1979), must be complied with.

D. The battery may be relocated in accordance with SJHUH001-003, Part Two, dated May 15, 2001, (formerly Hawkins and Power Report, HPA 120, Part Two).

E. After the required inspections, the aircraft must be found to be in a good state of preservation, repair and in a condition for safe operations.

- NOTE 5 This aircraft is prohibited from carrying cargo for compensation or hire. Carriage of cargo is limited to such cargo that is incidental to the aircraft owners/operators' business, which is other than air transportation. (this note applies to aircraft that have the special purpose "carrying of cargo").
- NOTE 6 Restricted category aircraft may not be operated in a foreign country without the express written approval of that country.
- NOTE 7 This aircraft has not been shown to meet the requirements of the applicable Comprehensive and Detailed Airworthiness Code as provided by Annex 8 to the Convention on International Civil Aviation.
- NOTE 8 Engine changes are allowed provided the replacement engine is of the same make and model as identified in this TCDS. The replacement engine must have proper military records and have the applicable FAA airworthiness inspection accomplished.
- NOTE 9 The Airworthiness Directives for the helicopter and engine contained in SJH Report No.SJHUH-01-004, dated May 15, 2001 (or later FAA approved Revision), must be reviewed and complied with prior to original certification.
- NOTE 10 Torque pressure output by the engine torque sensing system varies with individual engines. A calibration of this value is required on each engine and the value corresponding to take-off power is stamped on the engine data plate.
- NOTE 11 Gas producer speed as shown under "Engine Limits" is maximum permissible speeds. The gas producer speed rated power output varies with individual engines and must be determined during engine calibration and stamped on the engine data plate. The rated gas producer speed shown on the temperature limit placard installed on the instrument panel must correspond to the engine data plate gas producer speed. Gas producer speed limits vary with OAT in accordance with schedule as shown in the Temperature Limits (GO-NO-GO-TAKE OFF) placard on the instrument panel.
- NOTE 12 Maximum permissible exhaust gas temperature varies with ambient temperature as described in the Operator's Manual Check engine EGT by use of Health Indicator Test (HIT) prior to take-off (See TM 55-1520-219-10 and HIT EGT Log for the aircraft.
- NOTE 13 This approval applies to basic military surplus Bell Model UH-1B helicopters with no modifications except as required by San Joaquin Helicopters Report No. SJHUH-01-003, dated May 15, 2001 (or later FAA Approved revision).
- NOTE 14 Approved fuels are listed in U.S. Army TM55-1520-219-10, Chapter 2, Para. 2-102a. Some limitations apply for the use of certain alternative emergency fuels. These limitations are listed in this section.
- NOTE 15 Bell Helicopter Textron, Inc. has no involvement with this Type Certificate.
- NOTE 16 No person may be carried in this helicopter during flight unless that person is essential to the purpose of the flight.
- NOTE 17 Any alterations to the type design of this aircraft may require Instructions for Continued Airworthiness. These instructions must be submitted to and accepted by the FTW-AEG, Aircraft Evaluation Group Office prior to approval for return to service.

....END....